

Work Order ID 75954

75954

UR

November-02-11 10:39:25 AM

Page 1

Item ID: D3391-023

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Mid Tube Assembly

Stop

NS2

Start Date: 02/11/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 16/11/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: M L J

Date: 11/11/10

Tooling: _____

Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
D3391	Rev H	UR	1P	11/11/07					

100 0.00

100

Skidtubes

Skidtubes

Memo 0.00

Skidtubes

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to 0.297" (20 holes) as per Dwg D3391

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

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1

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Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

11-Open .375" holes to .438" ***do not open fwd saddle holes***

21

11-11-16

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect alignment, open up previously transfer drilled pilot holes in D3391-023/021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drill remaining 6 wearplate holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

11-12-1

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Memo

0.00

11-12-01 01

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

01 8 SAO 11-12-01

Hand Finishing

130

QC3- Inspect Part Finish

0.00

130

QC

Memo

0.00

01 0 BE11-12-02

Quality Control

W/O:		WORK ORDER CHANGES					
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1

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* Skidtubes	Skidtubes	0.00							
	Memo	0.00							
	1-Open float bag holes as per dwg 2-Sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: <u>12-08-12</u> batch#: <u>M119395</u>		3 SAD 11-12-02						
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00							
160 *160* Skidtubes	Skidtubes	0.00							
	Memo	0.00							
	1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush Wk. 11/13/05		A/R M118735						

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1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

S u 11205

170

QC

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

S u 11205

180

QC

Quality Control

185

Pressure Wash per QSI005 4.3

0.00

1 11/12/05

185

HandFinish

Hand Finishing

Memo

0.00

AND REALODINE AS PER PAR09-043

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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1

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Required Date: 16/11/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

190

Powdercoat

Powder Coating

Memo

10:20 0.00
START TIME: 3200°F
OVEN TEMPERATURE:
FINISH TIME: 10:50

200

QC3- Inspect Part Finish

0.00

200

QC

Quality Control

Memo

0.00

1X 8/11/12/06

1 8 11/12/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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1

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1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210		0.00							
210	Skidtubes								
Skidtubes									
Skidtubes									
	Memo	0.00							
	✓ 1- insert D3391-021 into D3391-23								
	✓ 2- insert T-pins into first and third fwd saddle holes								
	✓ 3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddle holes to 0.500" as per DSI 9364								
	✓ 4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos								
	✓ 5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415								
	✓ 6- deburr, re-alodine and blow out chips								
	✓ 7- press fit D3591-1 spacers using DT9416 starting from 0.500" side								
220	QC5- Inspect part completeness to step on W/O	0.00							
220									
QC									
Quality Control	Memo	0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Start Date: 02/11/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 16/11/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

230

HandFinish

HandFinishing

0.00

1

4 11/12/08

HandFinish

Memo

0.00

Hand Finishing

Install Inserts as per Dwg

240

QC5- Inspect part completeness to step on W/O

0.00

0.00 8 11/12/08

240

QC

Quality Control

250

Identify as per dwg & Stock Location: W10

0.00

D412-742-043 / B76400

1

4 11/12/08

250

Packaging

Memo

0.00

Packaging

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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1

Cust Item ID:

Required Date: 16/11/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

260

QC21- Final Inspection - Work Order Release

260

QC

Quality Control

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

11/12/09

Memo

0.00

MF
11-12-09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 75954

75954

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 02/11/2011

Required Date: 16/11/2011

Comments: IPP A05.10.20New Issue KJ/EC
 IPP B06.02.10ECN773 dwg rev.D EC
 IPP C 07.03.20 rev F dwg EC
 IPP D 07.03.28 re-format EC
 IPP E 07.10.31 ecn 1053P EC
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
 Rev:J add in seq 140 expire date & sikaflex DD 10.02.17 verified by:EC

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100		Manufactured	No			100	Each	65.0000	1	1			**

D2500-1-100

Skidtube Extrusion

LocationHALL
50251Loc Qty

65

65

Loc Code

D3391-021

D3391-021

Fwd Tube Assembly

100

Each

0.0000

1

1

X1

DP 11-12-1

D3389-1

D3389-1

Web

140

Each

0.0000

1

1

1

SAD 11-12-02

D3681-1

Spacer

160

Each

29.0000

5

5

1

BE 11-12-05

B76004 *5

Location

LG

Loc Qty

29

2

2

25

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 02/11/2011

Required Date: 16/11/2011

Start Qty: 1.00

Required Qty: 1.00

D3591-1

Manufactured No

210

Each

37.0000

2

2

**

B77453 (x2) Mid tube

D3591-1

Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST068	37	
57350	1	
66147	8	
71847	28	

ALS4-1032-130

Purchased No

230

Each

2,279.000

20

20

**

M119530 (x20) Mid tube

Insert

ALS7-1032-130

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST280	2000	
119084	2000	
ST281	279	
117717	2	
118237	12	
118312	2	
118386	263	

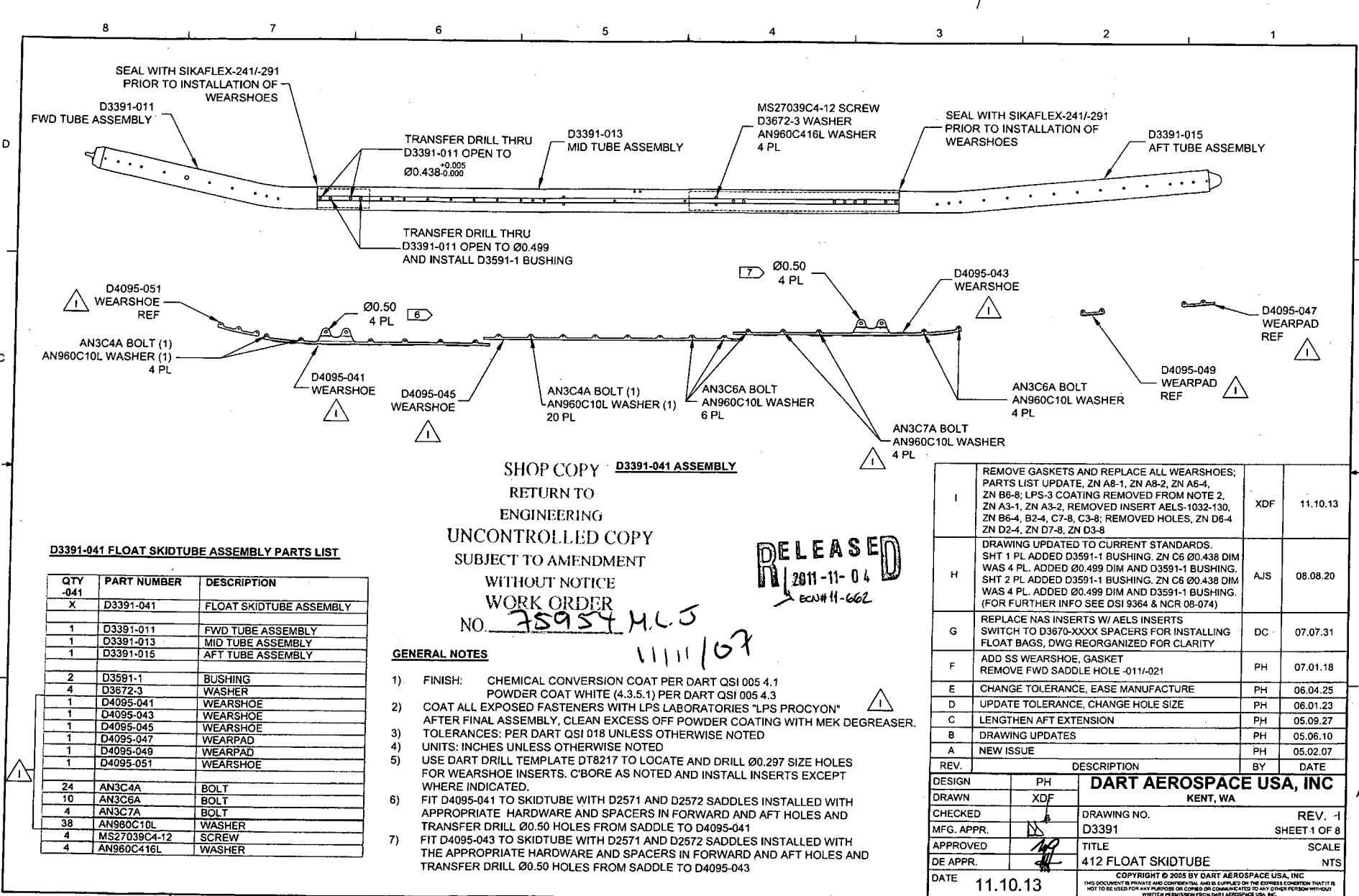
W/O:		WORK ORDER CHANGES							
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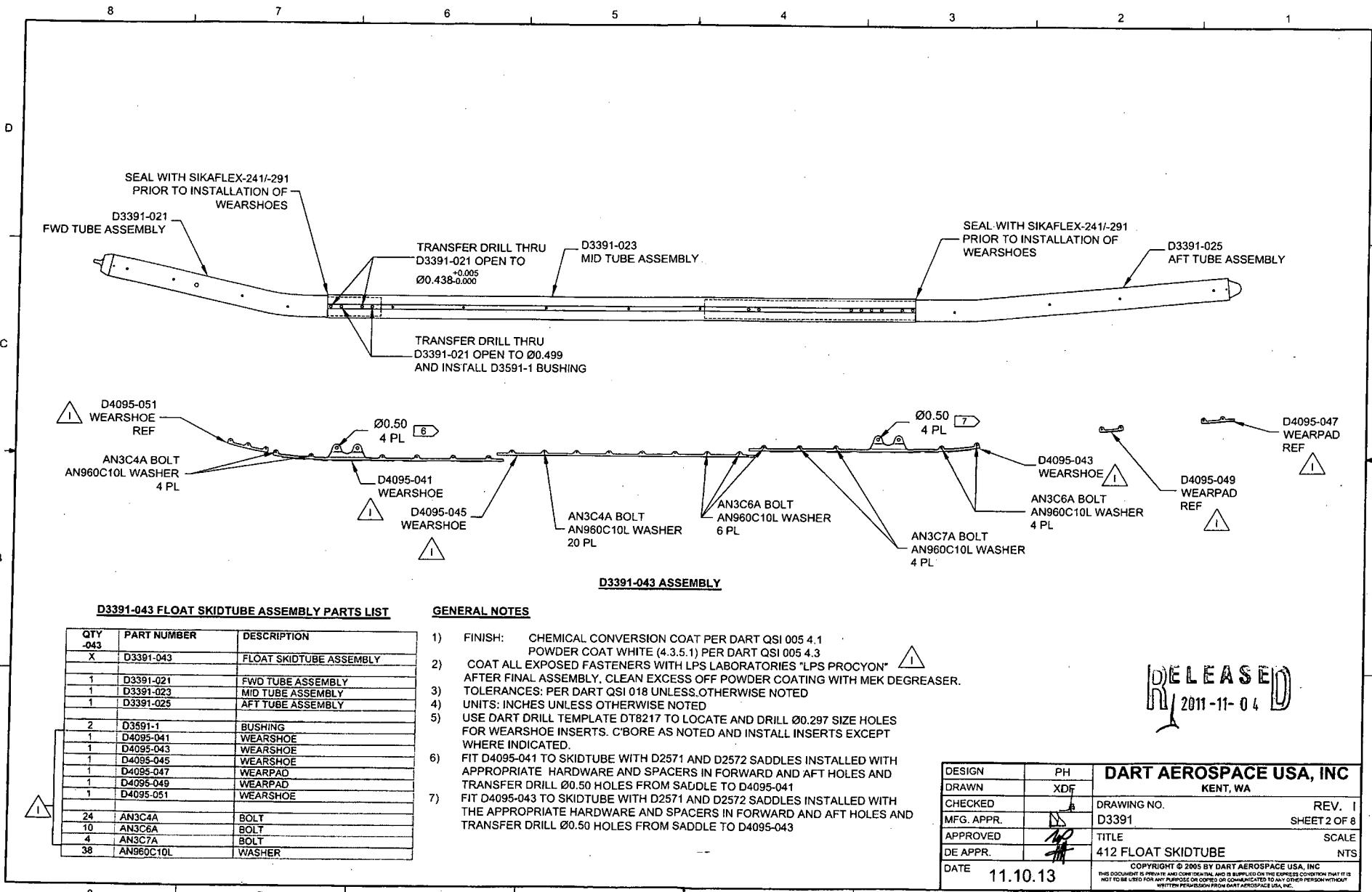
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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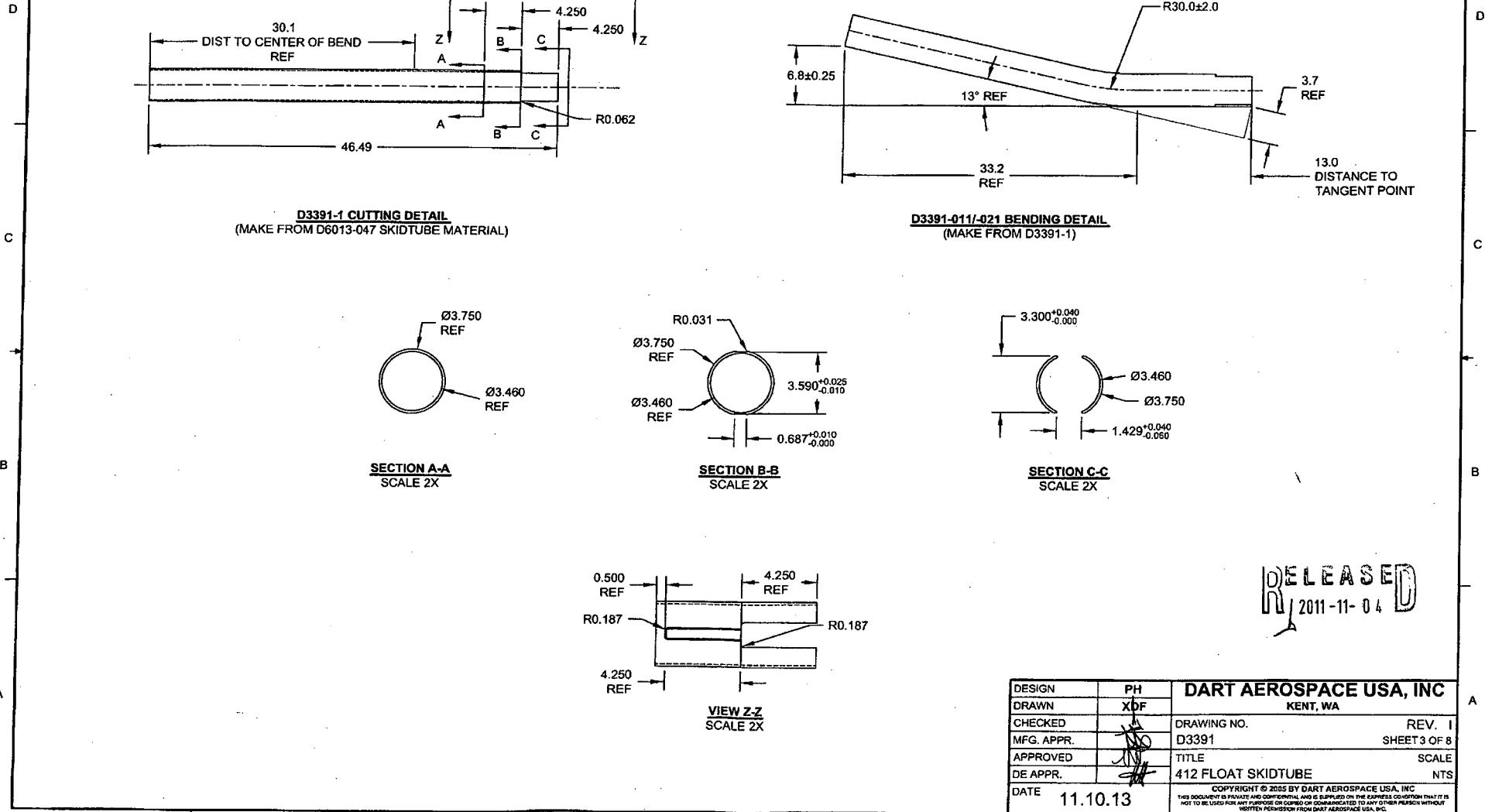
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NOTE: Date & initial all entries

75954

8 7 6 5 4 3 2 1



RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	XDF	KENT, WA
CHECKED		DRAWING NO. REV. 1
MFG. APPR.		D3391 SHEET 3 OF 8
APPROVED		TITLE SCALE
DE APPR.		412 FLOAT SKIDTUBE NTS
DATE	11.10.13	COPYRIGHT © 2015 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE USA, INC. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

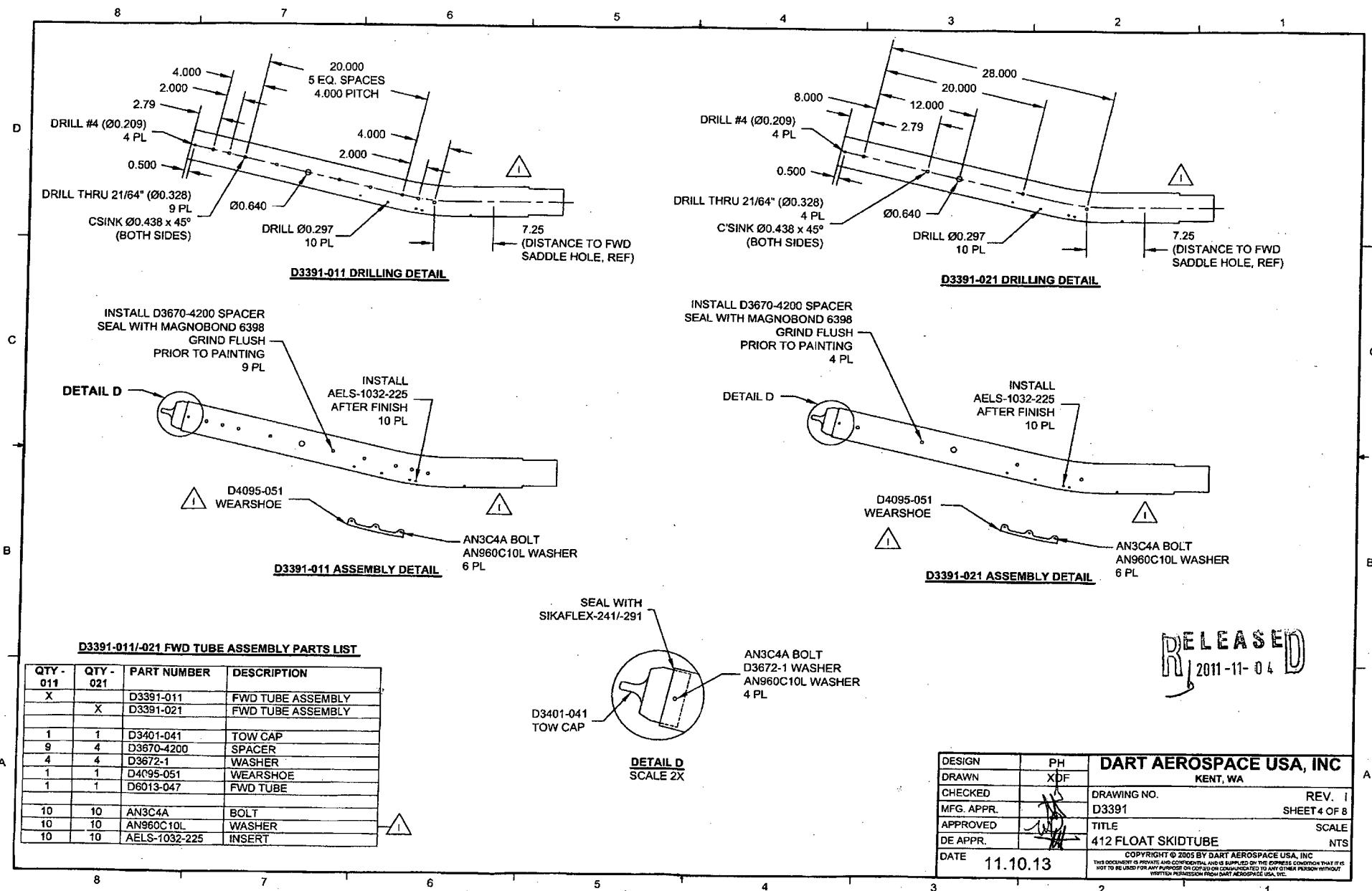
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

75954



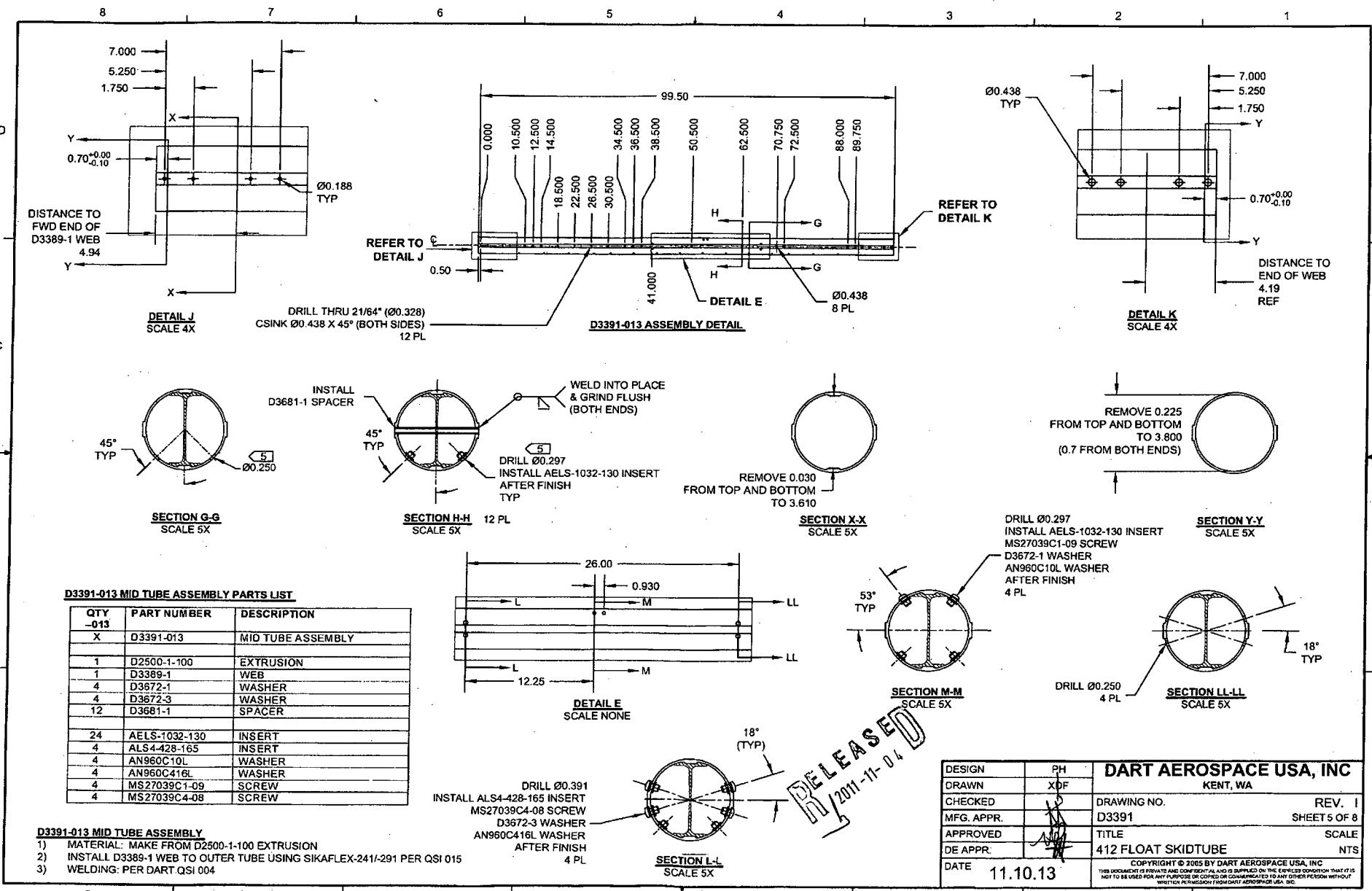
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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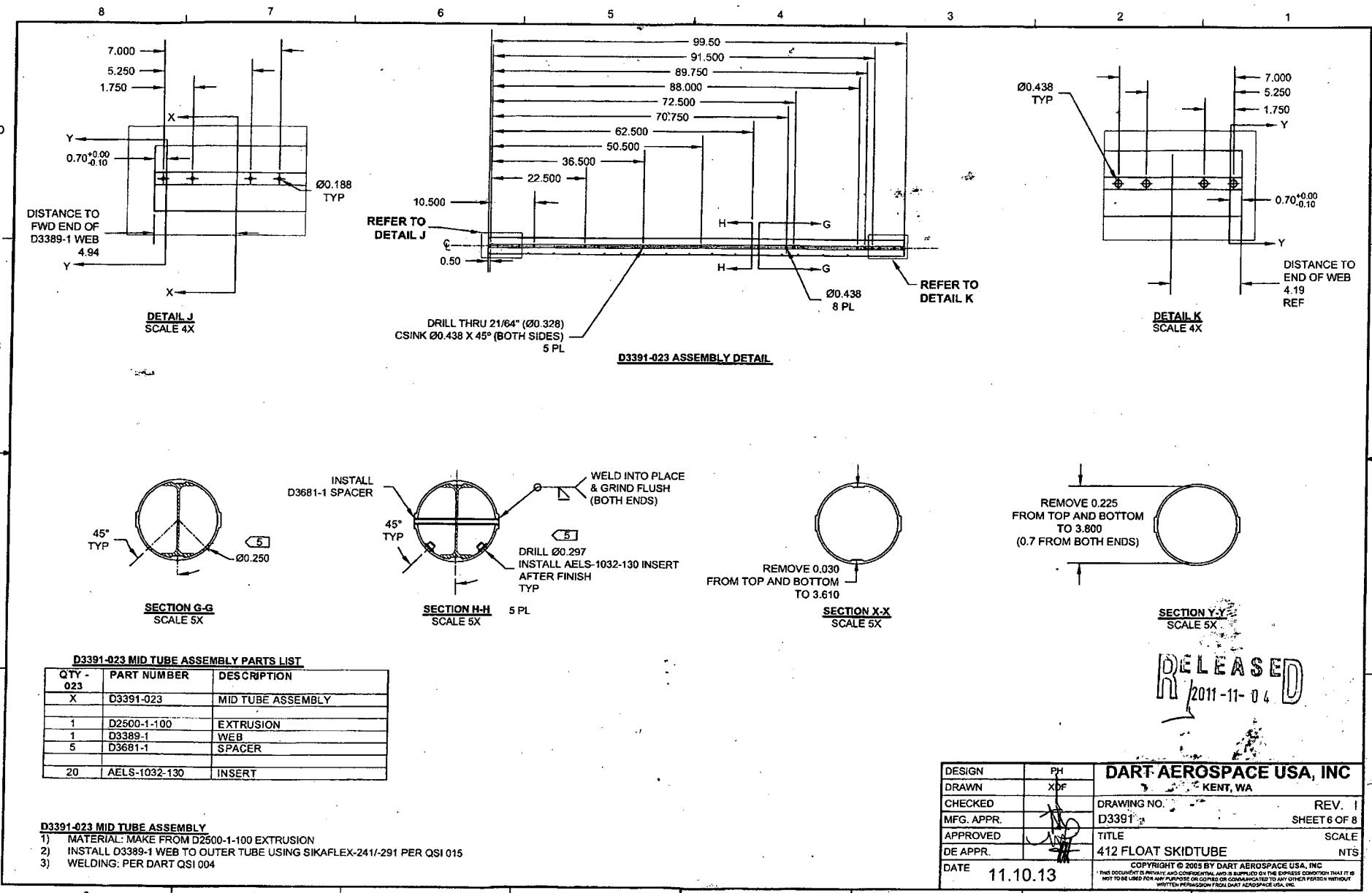
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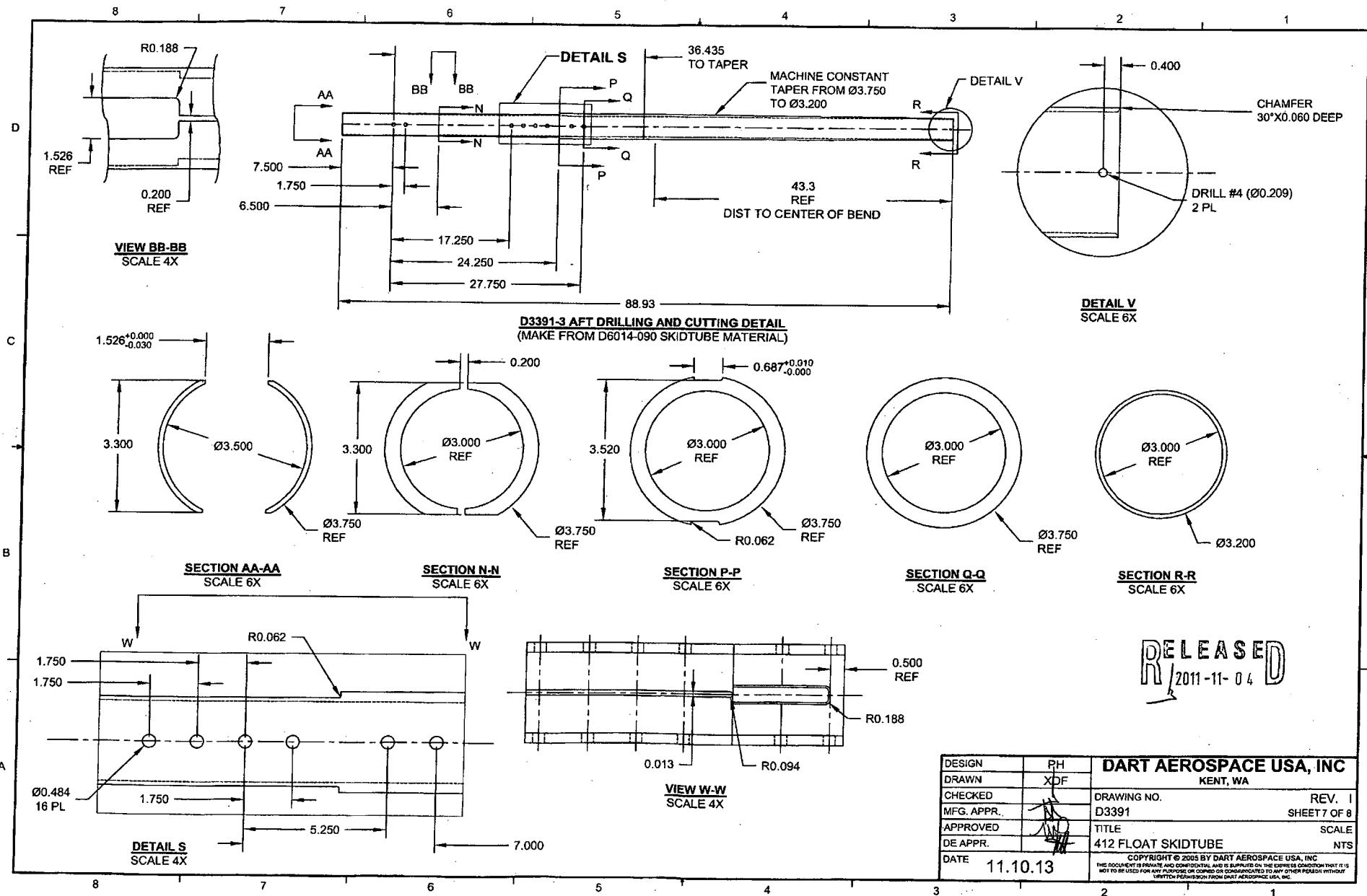
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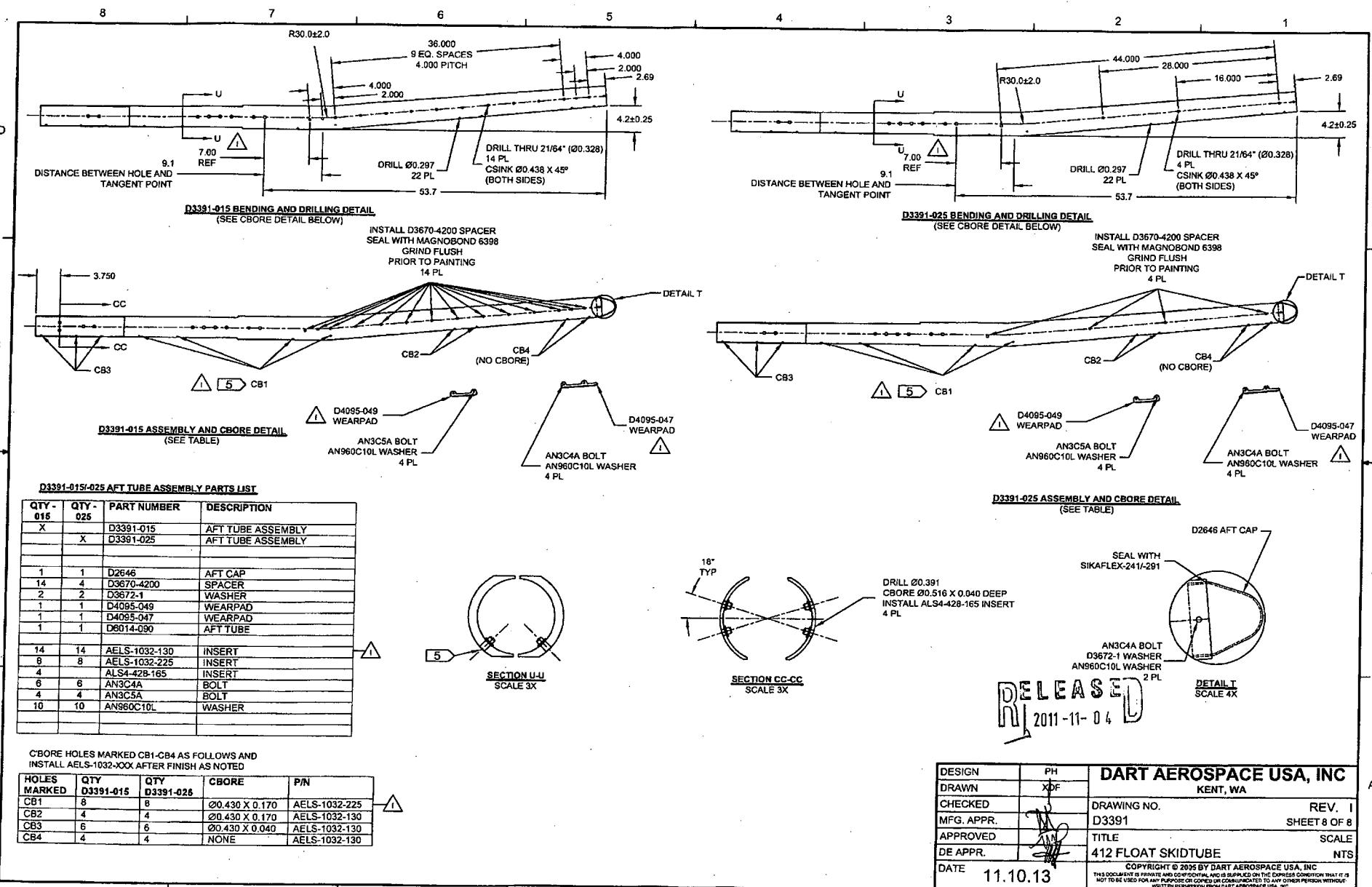
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NOTE: Date & initial all entries

NO. 264

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 73035
Part number: 3391-023
Description: MIG Tube
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap): pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier Barclay Elliott Date of Test Coupon 11-08-31
Welder Barclay Elliott Date of Test Coupon 11-08-31

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

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